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10/662,319	09/16/2003	Alexander Vincent Danilo	00169.002728.	9258

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

DHINGRA, PAWANDEEP

ART UNIT	PAPER NUMBER
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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

- This action is responsive to the following communication: Amendment after non-final action filed on 12/18/2008.
- Claims 17 and 19-22 are now pending.

Response to Arguments

Applicant's amendments, filed 12/18/2008 have been entered and fully considered. In light of the applicant's amendments and arguments, the rejection(s) have been withdrawn. However, upon further consideration, a new ground(s) of rejection(s) have been made and applicant's arguments have been rendered moot.

Examiner Notes

Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

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patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17 and 19-22 are rejected under 35 U.S.C. 103 as being unpatentable over Moore, US 2002/0015039 in view of Hiroshi Okubo, JP 11-073516.

Re claim 17, Moore discloses a method of rendering an image (see title), said method comprising the steps of: receiving an image representation of the image comprising overlapping graphic objects (see figure 8, it has two overlapping objects blue and red, paragraphs 62-63); generating a list of input edges in accordance with boundaries of the overlapping graphic objects (see fig. 11, paragraphs 62-63) (also see paragraphs 67, 73).

Okubo also teaches representation of the image comprising overlapping graphic objects (see figure 3, it shows 4 overlapping graphic objects, A, B, C & D); generating (creating) a list of input edges [mask edge list, MASK(DorC)] in accordance with boundaries (outlines) of the overlapping graphic objects (see figs. 2-3, paragraphs 54, 56). Okubo further teaches producing non-intersecting edges [new graphic edge, B and MASK(DorC)] from input edges on a per-scan-line basis (see paragraph 58 for processing per scanning line basis) (see fig. 2-3, paragraphs 52, 56); and rendering the image based on the generated non-intersecting edges (see paragraphs 54, 56, note target graphic is rendered based on both edge list and mask edge), wherein the non-intersecting edges form the boundaries (outlines) of non-overlapping graphic objects (elements A, B, etc., fig. 2) that are visually equivalent to the overlapping (fig. 3 shows

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overlapping objects) graphic objects (see figs. 2-3, paragraphs 52, 54, 56, note that non-intersecting edges (B and MASK(DorC) form the outline of non overlapping object B which is equivalent to the one shown for overlapping graphic objects in fig. 3); and at least one of the non-intersecting edges is shared by more than one of the non-overlapping graphic objects (see figs. 2-3 with text).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the method of rendering graphic objects as disclosed by Moore to include the overlapping graphic processing techniques as taught by Okubo for the benefit of increasing processing speed and reducing memory consumption as taught by Okubo in abstract.

Re Claim 19, Moore discloses an apparatus for rendering an image (rendering apparatus, fig. 3, paragraph 23), said apparatus comprising: receiving means (edge input module 408, fig. 4, note that module 408 receives edge data including data of overlapping edges 84, 94 as shown in fig. 8, see paragraphs 117-119) for receiving an image representation of the image comprising overlapping graphic objects (see figure 8, it has two overlapping objects blue and red, paragraphs 62-63); and generating means (display list generation 12, fig. 2, "the display list generation 12 is preferably implemented as a software module executing on the host processor 2", paragraph 66) for generating a list of input edges in accordance with boundaries of the overlapping graphic objects (see fig. 11, paragraphs 62-63) (also see paragraphs 67, 73).

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Okubo teaches producing means (overlapped graphics processor 14, drawing 1, paragraph 47, note that processor 14 performs all the steps of drawings 2-3, also see paragraphs 42-46) for producing non-intersecting edges [new graphic edge, B and MASK(DorC)] from the input edges on a per-scan-line basis (see paragraph 58 for processing per scanning line basis) (see fig. 2-3, paragraphs 52, 56); and rendering means (overlapped graphics processor 14, drawing 1, paragraph 47, note that processor 14 performs all the steps of drawings 2-3, also see paragraphs 42-46) for rendering the image based on the generated non-intersecting edges (see paragraphs 54, 56, note target graphic is rendered based on both edge list and mask edge), wherein the non-intersecting edges form the boundaries (outlines) of non-overlapping graphic objects (elements A, B, etc., fig. 2) that are visually equivalent to the overlapping (fig. 3 shows overlapping objects) graphic objects (see figs. 2-3, paragraphs 52, 54, 56, note that non-intersecting edges (B and MASK(DorC)) form the outline of non overlapping object B which is equivalent to the one shown for overlapping graphic objects in fig. 3); and at least one of the non-intersecting edges is shared by more than one of said the non-overlapping objects (see figs. 2-3 with text). Okubo also teaches representation of the image comprising overlapping graphic objects (see figure 3, it shows 4 overlapping graphic objects, A, B, C & D); generating (creating) a list of input edges [mask edge list, MASK(DorC)] in accordance with boundaries (outlines) of the overlapping graphic objects (see figs. 2-3, paragraphs 54, 56).

Re Claim 20, claim 20 recites identical features, as claim 17, except claim 20 merely deals with executing the method of claim 17 on a computer. Thus, arguments made for claim 17 are applicable for claim 20.

Re claim 21, Moore further teaches maintaining a list of active edges comprising input edges that intersect a current scan-line (see figs. 10-11, paragraphs 118-119, 125-128) (also see figs. 12-13 with text).

Okubo teaches deriving from active edges (original graphic edge) a list of corresponding output edges (new graphic edge) to include the non-intersecting edges (see figs. 2-3, paragraphs 49-56).

Re claim 22, Moore further teaches creating a new output edge when an active edge does not have a corresponding output edge; and terminating the output edge when the output edge does not have a corresponding active edge (see paragraphs 62, 118-119, 125-128) (also see figs. 12-13 with text).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAWANDEEP S. DHINGRA whose telephone number is (571)270-1231. The examiner can normally be reached on M-F, 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./

Examiner, Art Unit 2625

/David K Moore/

Supervisory Patent Examiner, Art Unit 2625